What is claimed is:

1. A method for generating a transformer model, comprising:

defining a data base by selecting a first and a second set of parameters for inclusion in the data base, the first set of parameters being representative of at least one of as-designed and as-built transformer data, the second set of parameters being representative of transformer performance data;

storing data from a plurality of transformers in the data base, the data from a plurality of transformers corresponding to the first and second sets of parameters; and

determining interrelationships between the first and second sets of parameters by analyzing the data from a plurality of transformers using multivariate statistical analysis.

2. The method of claim 1, wherein determining interrelationships between the first and second sets of parameters by analyzing the data from a plurality of transformers using multivariate statistical analysis comprises:

identifying a first set of variations between the data from a plurality of transformers corresponding to the first set of parameters;

identifying a second set of variations between the data from a plurality of transformers corresponding to the second set of parameters; and

correlating the first and second set of variations.

3. The method of claim 1, wherein determining interrelationships between the first and second sets of parameters by analyzing the data from a plurality of transformers using multivariate statistical analysis comprises determining interrelationships between the first and second sets of parameters by analyzing the data from a plurality of transformers using cluster analysis.

4. The method of claim 1, wherein determining interrelationships between the first and second sets of parameters by analyzing the data from a plurality of transformers using multivariate statistical analysis comprises determining interrelationships between the first and second sets of parameters by analyzing the data from a plurality of transformers using decision-tree analysis.

5. The method of claim 1, wherein the transformer performance data comprises test results.

6. The method of claim 5, wherein the test results comprise measurements relating to at least one of load loss, impedance, transformation ratio, turn-to-turn faults, high-potential test results, double induced test results, impulse test results, heat run test results, sound level, and short circuit test results.

7. The method of claim 1, wherein the data base comprises a first table for storing the data corresponding to the first set of data parameters, and a second table for storing the data representative of the second set of data parameters.

8. The method of claim 7, wherein the data base comprises a plurality of data packages each corresponding to a different one of the plurality of transformers and each comprising one of the first tables and one of the second tables.

9. The method of claim 7, wherein the data base further comprises a third table for storing the data representative of the first set of data parameters, and the first, second, and third tables are arranged in a star schema.

10. The method of claim 1, wherein the as-designed transformer data comprises design specifications and the as-built transformer data comprises as-built specifications.

11. The method of claim 1, wherein the first set of parameters includes data relating to a transformer manufacturing environment.

12. The method of claim 11, wherein the first set of parameters includes identifying information relating to at least one of a manufacturing location, a winding machine used to wind a transformer core, a cutting machine used to cut material used in a transformer core, a retooling date for transformer manufacturing equipment, and a material batch used to manufacture a transformer component.

13. The method of claim 1, wherein the first set of parameters includes data relating to a transformer testing environment.

14. The method of claim 13, wherein the first set of parameters includes data relating to a calibration data of test equipment.

15. The method of claim 1, wherein the first set of parameters includes data relating cost penalties associated with transformer performance shortfalls.

16. The method of claim 1, wherein the as-designed and as-built transformer data comprise information relating to at least one of design number; design version; grade of core material; core mass; core annealing; tank type; conductor size; conductor material; and type of conductor.

17. The method of claim 16, wherein the data base comprises:

a first table having the transformer performance data stored therein;

a second table having the information relating to the design number and design version stored therein;

a third table having the information relating to the grade of core material, core mass, and core annealing stored therein;

a fourth table having the information relating to the tank type stored therein; and a fifth table having the information relating to the conductor size, conductor material, and type of conductor stored therein.

18. The method of claim 1, wherein the data base is structured as a cube.

19. A method for generating a transformer model, comprising:

creating a data base for storing a first and a second set of data from a first previously-built transformer and a first and a second set of data from a second previously-built transformer;

inputting the first and second sets of data from the first and second transformers into the data base; and

correlating variations between the first sets of data from the first and second previously-built transformers with variations between the second sets of data from the first and second previously-built transformers.

20. The method of claim 19, wherein correlating variations between the first sets of data from the first and second previously-built transformers with variations between the second sets of data from the first and second previously-built transformer comprises correlating the variations between the first sets of data from the first and second previously-built transformers with the variations between the second sets of data from the first and second previously-built transformer using multivariate statistical analysis.

21. The method of claim 20, wherein correlating the variations between the first sets of data from the first and second previously-built transformers with the variations between the second sets of data from the first and second previously-built transformer using cluster analysis.

22. The method of claim 20, wherein correlating the variations between the first sets of data from the first and second previously-built transformers with the variations between the second sets of data from the first and second previously-built transformer using decision-tree analysis.

23. The method of claim 19, wherein the first sets of data for the first and second transformers comprise transformer performance data.

24. The method of claim 23, wherein the transformer performance data comprises test results.

25. The method of claim 19, wherein the second sets of data comprise at least one of as-designed and as-built transformer data.

26. The method of claim 25, wherein the as-designed transformer data comprises design specifications and the as-built transformer data comprises as-built specifications.

27. The method of claim 25, wherein the second sets of data include data relating to a transformer manufacturing environment.

28. The method of claim 27, wherein the second sets of data include identifying information relating to at least one of a manufacturing location, a winding machine used to wind a transformer core, a cutting machine used to cut material used in a transformer core, a retooling date for transformer manufacturing equipment, and a material batch used to manufacture a transformer component.

29. The method of claim 19, wherein the second sets of data include data relating to a transformer testing environment.

30. The method of claim 29, wherein the second sets of data include data relating to a calibration data of test equipment.

31. The method of claim 19, wherein the second sets of data include data relating cost penalties associated with transformer performance shortfalls.

32. A method for validating a design for a transformer, comprising:

inputting data representing design specifications of the transformer into a transformer model generated according to the method of claim 1;

receiving data from the transformer model representing predicted performance characteristics of the transformer; and

comparing the predicted performance characteristics to predetermined performance requirements for the transformer.

33. A method for optimizing a first design parameter of a transformer, comprising:

(a) inputting a value for the first design parameter and values for a plurality of other design parameters of the transformer into a transformer model generated in accordance with the method of claim 1;

(b) receiving data from the transformer model representing predicted performance characteristics of the transformer based on the first design parameter and the plurality of other design parameters for the transformer;

(c) comparing the data representing the predicted performance characteristics of the transformer to predetermined performance requirements for the transformer; and

(d) varying the value of the first design parameter and repeating steps (a)-(c) until the predicted performance characteristics do not satisfy the predetermined performance requirements.

34. A method for designing a transformer, comprising:

inputting data representative of one or more performance-related requirements of the transformer into a transformer model created in accordance with claim 1; and

receiving data from the transformer model representative of predicted design specifications for the transformer necessary to satisfy the one or more performance-related requirements.

35. A computing system for generating a transformer model, comprising a computer having an application processing and storage area, the application processing and storage area comprising a computing engine and a data base for storing data from a plurality of transformers, the data from a plurality of transformers corresponding to a first and a second set of parameters, the first set of parameters being representative of at least one of as-designed and as-built transformer data, the second set of parameters being representative of transformer performance data, wherein the computing engine is configured to determine interrelationships between the first and second sets of parameters by analyzing the data from a plurality of transformers using multivariate statistical analysis.

36. The system of claim 35, wherein the computing engine is configured to determine interrelationships between the first and second sets of parameters by analyzing the data from a plurality of transformers using cluster analysis.

37. The system of claim 35, wherein the computing engine is configured to determine interrelationships between the first and second sets of parameters by analyzing the data from a plurality of transformers using decision-tree analysis.

38. The system of claim 35, wherein the computing engine is configured to determine interrelationships between the first and second sets of parameters by:

identifying a first set of variations between the data from a plurality of transformers corresponding to the first set of parameters;

identifying a second set of variations between the data from a plurality of transformers corresponding to the second set of parameters; and

correlating the first and second set of variations.

39. The system of claim 35, wherein the data base comprises a first table for storing the data corresponding to the first set of data parameters, and a second table for storing the data representative of the second set of data parameters.

40. The method of claim 39, wherein the data base comprises a plurality of data packages each corresponding to a different one of the plurality of transformers and each comprising one of the first tables and one of the second tables.

41. A computing system for generating a transformer model, comprising a computer having an application processing and storage area, the application processing and storage area comprising a computing engine and a data base, the data base having stored therein a first and a second set of data from a first previously-built transformer and a first and a second set of data from a second previously-built transformer, the computing engine being configured to correlate variations between the first sets of data from the first and second previously-built transformers with variations between the second sets of data from the first and second previously-built transformers.

42. A method for generating a transformer model using a data base having a first and a second set of parameters included therein, the first set of parameters being representative of at least one of as-designed and as-built transformer data, the second set of parameters being representative of transformer performance data, the method comprising:

storing data from a plurality of transformers in the data base, the data from a plurality of transformers corresponding to the first and second sets of parameters; and

determining interrelationships between the first and second sets of parameters by analyzing the data from a plurality of transformers using multivariate statistical analysis.

43. A method for generating a transformer model using a data base for storing a first and a second set of data from a first previously-built transformer and a first and a second set of data from a second previously-built transformer, the method comprising:

inputting the first and second sets of data from the first and second transformers into the data base; and

correlating variations between the first sets of data from the first and second previously-built transformers with variations between the second sets of data from the first and second previously-built transformers.